

Chapter 6: Glossary

This chapter contains a list of acronyms and abbreviations used frequently in this EIS and a list of terms used that may not be found in a standard desk reference.

Acronyms

BIA	Bureau of Indian Affairs
BPA	Bonneville Power Administration
CBFWA	Columbia Basin Fish and Wildlife Authority
CPP	Current Production Program
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
CWA	Clean Water Act
DEQ	(Oregon) Department of Environmental Quality
DNA	Deoxyribonucleic Acid
DPS	Distinct Population Segment
EIS	Environmental Impact Statement
EPA	(U.S.) Environmental Protection Agency
ESA	Endangered Species Act
GRES P	Grande Ronde Basin Endemic Spring Chinook Supplemental Program
HCNRA	Hells Canyon National Recreation Area
HGMP	Hatchery and Genetic Management Plan
ICBEMP	Interior Columbia Basin Ecosystem Management Program
IFIM	Instream Flow Incremental Methodology
ISRP	Independent Scientific Review Panel
LSRCP	Lower Snake River Compensation Plan
NMFS	National Marine Fisheries Service (same as NOAA Fisheries)
NATURES	Natural Rearing and Enhancement Systems (see definition in Technical Terms)
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries Service
NEOH	Northeast Oregon Hatchery
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NPCC	Northwest Power and Conservation Council (formerly the NPPC or Northwest Power Planning Council)
NPPC	Northwest Power Planning Council (now the NPCC)

NPT	Nez Perce Tribe
ODFW	Oregon Department of Fish and Wildlife
ODSL	Oregon Department of State Lands
ONHP	Oregon Natural Heritage Program
ORV	Outstandingly Remarkable Values
PCB	Polychlorinated Biphenyls
RHCA	Riparian Habitat Conservation Area
RM	River Mile
SAR	Smolt-to-Adult-Return Ratios
SHPO	State Historic Preservation Office
TCP	Traditional Cultural Property
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Loads
UGB	Urban Growth Boundary
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service
VQO	Visual Quality Objective (see definition in Technical Terms)

Abbreviations

cfs	cubic feet per second
gpm	gallons per minute

Technical Terms

303(d) List – Pursuant to Section 303(d) of the Clean Water Act, Oregon’s Department of Environmental Quality (DEQ) maintains a list of stream segments that do not meet water quality standards.

Acclimation – Allowing fish to adjust to environmental variables. Hatchery practices where young fish were released directly from the hatchery without adjusting to the natural stream environment resulted in higher mortality. Acclimation allows the fish to gradually adjust to a more natural environment and become accustomed to the area in which the acclimation site is located, rather than the hatchery, so that the fish will return to the area to spawn.

Acclimation site – Sites at which young fish are held to allow them to become accustomed to the area (a biological process called imprinting) so that they return to that place to spawn.

Alluvial – Deposited by rivers; generally refers to the recent, unconsolidated material laid down in river beds, flood plains, lakes, at the foot of eroded slopes, etc.

Anadromous – Species of fish that hatch and initially grow in freshwater, migrate to and mature in the ocean, and return to freshwater as adults to spawn (such as salmon or steelhead trout).

Anthropogenic – Made or generated by a human or caused by human activity.

Broodstock – Adult fish used to create hatchery fish.

Carrying capacity – The maximum number of individuals or species (biomass) that could potentially be supported by a given habitat, as determined by prevailing physical, chemical, and biological conditions. Also, in terms of a habitat, such as a river or stream, the amount of introduced material (such as sediment) that could be accommodated without degrading the quality of the habitat.

Chinook (*Oncorhynchus tshawytscha*) – A species of salmon, also called king, tule, or brights.

Chiwawa weir – A type of barrier used to catch adult fish migrating upstream; unique because panels in the barrier are fitted with hydraulic cylinders that allow an operator to raise or lower the barrier from the river bank. The barrier gets its name from the Chiwawa River in eastern Washington where the first hydraulically operated barrier was installed.

Cofferdam – Temporary structure placed in a body of water to de-water or divert flow during construction of in-water structures (such as intakes, fish ladders, or weirs).

Coho (*Oncorhynchus kisutch*) – A species of salmon, also called silver salmon.

Cumulative effects – Cumulative effects are created by the incremental effect of an action when added to other past, present, and reasonably foreseeable actions.

Domestication selection – Natural selection for traits which affect survival and reproduction in a human-controlled environment.

Empirical – Based on observation or experience.

Escapement – Fish that are allowed to spawn naturally.

Evolutionarily significant unit – A population or group of populations that is considered distinct (and hence a “species”) for purposes of conservation under the ESA. To qualify as an ESU, a population must: 1) be reproductively isolated from other populations of the same species; and 2) represent an important component in the evolutionary legacy of the biological species.

Extirpated – Rendered extinct in a given area, or locally extinct.

Eyed-eggs – Life stage of a fertilized egg between the time the eyes become visible and hatching occurs.

Flood Event – A flood. A “50-year flood” is an event with a two percent chance of occurring in a given year. A “100-year flood” is an event with a one percent chance of occurring in a given year. A “200-year flood” has a 0.5 percent chance of occurring in a given year, and the “500-year flood” has a 0.2 percent the chance of occurring in a given year. These are considered rare, extreme events. A 100-

year flood event, for example, is not one that will occur once every 100 years although 100 years is the statistical return period. It is possible for an area to experience two 100-year events in two consecutive years.

Forest Service – U.S. Forest Service within the U.S. Department of Agriculture

Formalin – A solution of formaldehyde gas in water; effective in control of external parasites and fungal infections on fish and fish eggs.

Fry – Juvenile salmonid life stage following absorption of yolk sac.

Genetic diversity – Richness of genetic material (chromosomal makeup) in a **population** or populations.

Genetic drift selection – The result of a small representative sample size of a population contributing to the next generation; genetic drift can cause reduced fitness.

Geomorphology – The general configuration of the earth's surface and landforms.

Heterozygosity – In an individual that has two different chromosomes for a gene.

Homing – Navigational behavior that guides species during migrations.

Hydraulic velocity barrier – Structure built in the tail race of a weir or impoundment outlet which blocks or redirects adult fish migration to prevent injury or migration delay.

Introgression – The introduction of new genes into a **population** by crossbreeding between two populations; also a loss or change in population identity through crossbreeding or genetic change.

Indigenous – Occurs naturally in an area or environment; native.

Instream work window – Time period preferred by regulatory agencies for conducting instream work.

Kelt – An **anadromous** steelhead trout that survives spawning and migrates back to the ocean after spawning.

Morphological – Appearance or form. (**Morphology** – Study of structure, appearance or form.)

Natal – Of or relating to birth.

Naturally reproducing – Adult fish spawning in a stream or river regardless of parental origin, *i.e.* hatchery or wild.

NATURES – Fish rearing techniques aimed at producing hatchery salmon with an increased rate of post release survival. NOAA Fisheries has been cooperating with BPA on the Natural Rearing Enhancement Systems (NATURES) project to develop and evaluate new fish culture techniques designed to produce salmon that are physically and behaviorally similar to wild fish. Techniques developed and studied to date include use of more natural materials and conditions in hatchery **raceways**, underwater feeders, live food diets, predator avoidance training and other means to simulate natural conditions.

Obermeyer gate – A manufactured gate system fabricated by the Obermeyer Corporation; commonly refers to a type of gate that consists of a series of steel panels that are lifted or lowered by an air bladder located beneath them.

100-year floodplain – Land area adjacent to a stream channel which is covered with water when the stream overflows its banks during a 100-year **flood event**.

Ordinary high water – The highest point on the bank of a stream or river channel, where a change in vegetation or other natural mark indicates the level of the highest normal flows.

Outplant – Releasing artificially propagated fish into a natural system.

Parr – A developmental life stage of a fish; when juvenile salmonids develop bar-shaped marks on their sides and are actively feeding in fresh water.

Pathogen – A disease-causing agent.

Picket weir – A fish barrier constructed from fixed panels that can not be adjusted or cleaned easily once installed. Typically, panels are set in a fixed position in a body of water at the beginning of the fish trapping season and removed at the completion of trapping activities.

Plasticity – Capacity to change or modify.

PM 2.5 – Particles (in the air) that are 2.5 microns in diameter or smaller.

PM 10 – Particles (in the air) that are 10 microns in diameter or smaller; particles that can be inhaled into the lungs.

Population(s) – A group or groups of individuals of a species living in a certain area.

Population viability – The overall condition and long-term probability of survival of a population.

Predation – The harm, destruction, or consumption of prey organisms by a predator.

Production – Number of individuals produced from a natural environment or fish culture facilities.

Race – A group of individuals within a species, forming a unique variety; a particular breed.

Raceway – An elongated pond for holding equipment and fish for rearing juvenile or adult salmonids in a hatchery or associated facility.

Redd – A gravel nest where salmon or trout eggs are laid.

Resident – Present year round (not migratory).

Riparian habitat – The zone which extends from the water's edge landward where vegetation and microclimate are heavily influenced by water such as near streams, rivers, springs, ponds, lakes, or tidewater.

Salmonid – Fish belonging to the family of salmonidae, including salmon, trout, char, whitefish, and related freshwater and anadromous fish.

Satellite facility – Fish culture facility used for incubation, rearing, and **acclimation** of juvenile salmon or holding of adult **broodstock**.

Scoping – For an environmental impact statement, the process of defining the range of issues requiring examination in studying the environmental effects of a proposed action, generally including public consultation with interested individuals and groups, as well as with agencies with jurisdictions over parts of the project area or resources in that area.

Sensitive species – Species not listed as threatened, but undergoing evaluation for listing on an official threatened or endangered species list.

Smolt – A young salmon or steelhead migrating to the ocean and undergoing physiological changes to adapt its body from a freshwater to a saltwater environment.

Smoltification – The physiological changes in **anadromous** fish as they prepare to live in salt water.

Spawn(ing) – The act of producing or depositing eggs or sperm.

Species – Basic category of biological classification intended to designate a single distinct kind of plant or animal.

Species of special concern – Native species of which the status is of concern, but more information is needed.

Steelhead – **Anadromous** Pacific salmon, protected by ESA in the Columbia River Basin and Pacific Ocean.

Stock or stocks – A distinct subset of a fish species isolated in space or time from other subsets of the same species.

Subbasin – River basin within a larger river basin.

Substrate – The material comprising the bed of a stream; also the surface or material on which an organism grows or is attached.

Subyearling smolts – Juvenile salmonids that physiologically mature and migrate to the ocean when less than one year old; *e.g.*, certain stocks of fall and summer chinook.

Supplementation – The use of artificial propagation in the attempt to maintain or increase natural production while maintaining the long-term fitness of the target population, and while keeping the ecological and genetic impacts on non-target populations within specified biological limits.

Taking or Take – Relating to the ESA, a broadly defined term that may include everything from actually killing a protected species to causing harm to the species' habitat.

Telosts – Bony fishes, having skeletons of bones rather than cartilage.

Viewshed – The area from which a critical object or viewpoint is seen; also known as the “seen area” (Smarden et al. 1986). For purposes of this study, the term viewshed refers to the general area from which the project is visible, particularly from distances of less than one-half mile away.

Visual Quality Objective (VQO) – A management goal or standard established by the Forest Service to describe the acceptable level of modification associated with land use activity in a given area. Visual Quality Objectives range from "preservation" which is typically applied only to highly sensitive landscapes such as wilderness areas or special classified areas to "maximum modification," a standard that allows land use activity that may appear dominant in relationship to the natural landscape while not completely harmonizing with the natural setting (U.S. Forest Service 1995).

Volitional – In the context of releasing fish, allowing a fish to leave or migrate on their own initiative or instinct.

Weir – A fence or a barrier placed in a stream to catch, retain or count upstream migrating fish.

Wild fish – Fish that have not spent any part of their life history in an artificial environment and are the progeny of naturally-reproducing adults.